

# MAPPING OF MACRO WASTE WASHED UP ON SHKUMBIN RIVER BANKS





# 1 INTRODUCTION

## Mapping of macro waste washed up on Shkumbin river banks

**The BeMed+ project aims to support and accompany the implementation of actions on the ground to reduce plastic pollution in the Mediterranean, particularly in the southern and eastern Mediterranean countries (SEMCs). The BeMed+ project focuses on two pilot regions: Albania and Tunisia.**

One of the components relies on the network of local players to gain a better understanding of the issues surrounding plastic pollution in these two regions and to build and support the implementation of an action plan targeting waste management, the HoReCa sector and the sports sector. Therefore, in order to better understand the regional context, a state of the art of existing studies, scientific projects and other initiatives on the sources and flows of macro and microplastic pollution in the pilot regions is being carried out.

Among these studies, and to supplement the data and initiatives that do not exist, the protocol for mapping plastic pollution in rivers developed by Surfrider Foundation Europe has been implemented on the

river Shkumbin. This protocol makes it possible to quantify and qualify plastic pollution throughout the catchment area and to draw up a map of the areas where waste accumulates and their typology. The method involves geolocating visible waste (i.e. recording its GPS position) on the banks from a kayak-type boat using a mobile application. The data are collected on different sections of 500 m to 4 km spread evenly throughout the river. The processed data is used to locate the areas of the river most affected and to compare plastic pollution in the river from one year to the next.

This report represents the data collected between 05/26/2024 and 05/29/2024 on the river Shkumbin.

*Figure 1 (cover picture) | Plastic Orgins expedition, France. © Surfrider Foundation Europe*

# 2 REPORT ON THE EXPEDITION

This data collection was spread over 4 days. The first day was spent packrafting from upstream to downstream of Librazhd. Then on the other 3 days, supervised by the Sport and Tourism Association, the data was collected by 4 people on a raft. The idea was to map the river from upstream of Librazhd to downstream of Elbasan (Cengelaj).



Figure 2 | Plastic Orgins expedition the Shkumbin river, Albania. © Clémence Baudu-Descamps





Figure 3, 4, 5 | Plastic Orgins expedition the Shkumbin river, Albania. © Clémence Baudu-Descamps

# 3 SUMMARY OF SECTIONS STUDIED

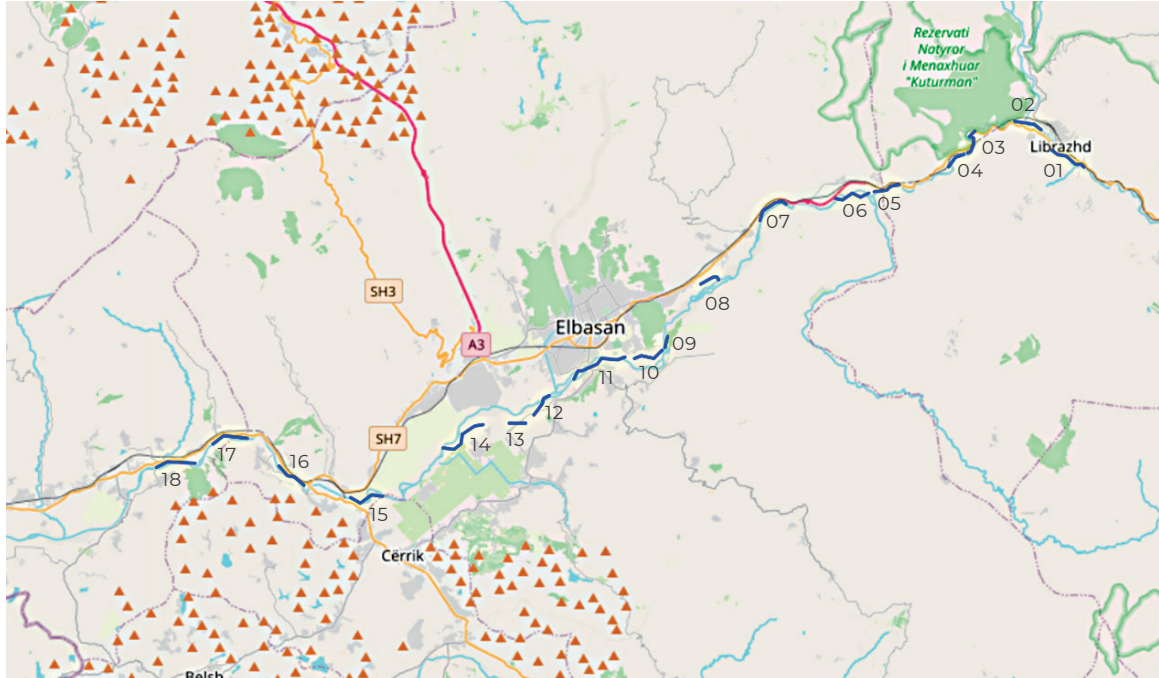
Just over 25 km of the 50-km Shkumbin River were monitored. On 18 stretches averaging 1.4km, numbered from 1 to 18, from upstream to downstream, the teams reported rubbish observed on the banks from the water:

N° SECTION	DATE	DISTANCE COVERED (M)	DURATION (MIN)	BANK OBSERVED
1	05/26/2024	1 252	17	RIGHT
2	05/26/2024	863	6	RIGHT
3	05/26/2024	1 193	11	RIGHT
4	05/26/2024	1 566	25	RIGHT
5	05/27/2024	894	7	RIGHT
6	05/27/2024	557	9	RIGHT
7	05/27/2024	1 551	13	RIGHT
8	05/27/2024	1 579	16	RIGHT
9	05/27/2024	1 398	10	LEFT
10	05/28/2024	1 592	23	LEFT
11	05/28/2024	714	8	RIGHT
12	05/28/2024	2 595	22	RIGHT
13	05/28/2024	1 296	32	RIGHT
14	05/28/2024	1 099	12	RIGHT
15	05/28/2024	2 237	25	LEFT
16	05/29/2024	1 598	15	LEFT
17	05/29/2024	1 437	14	RIGHT
18	05/29/2024	1 697	19	LEFT



## SUMMARY OF SECTIONS STUDIED

The decision to map small sections on a regular basis is explained by the desire to highlight areas of accumulation. In fact, the presence of waste is continuous on both the right and left banks. We therefore wanted to map the areas of accumulation so that they would stand out more clearly on the final map.



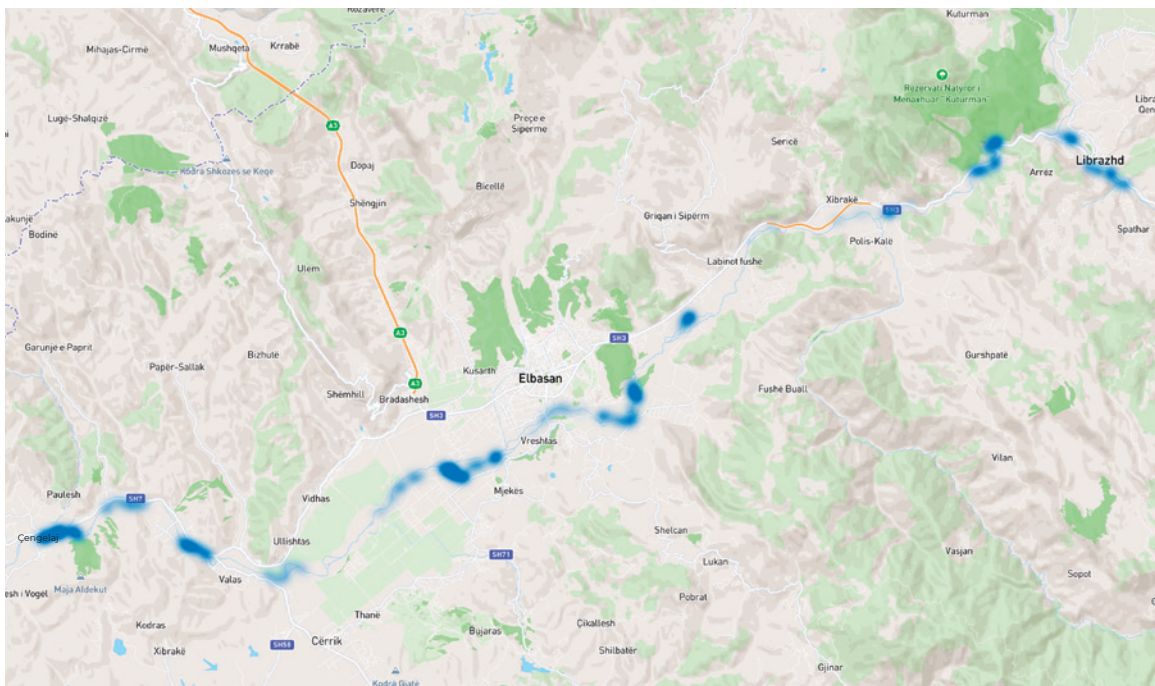
**Figure 6** | Map showing the 18 sections of the Shkumbin river studied: section 1 is the furthest upstream before the town of Librazhd and section 18 is the furthest downstream.



**Figure 7** | Plastic Orgins expedition the Shkumbin river, Albania. © Clémence Baudu-Descamps

# 4 REPORTED LITTER

1,185 items of litter were reported over the 25 km covered.



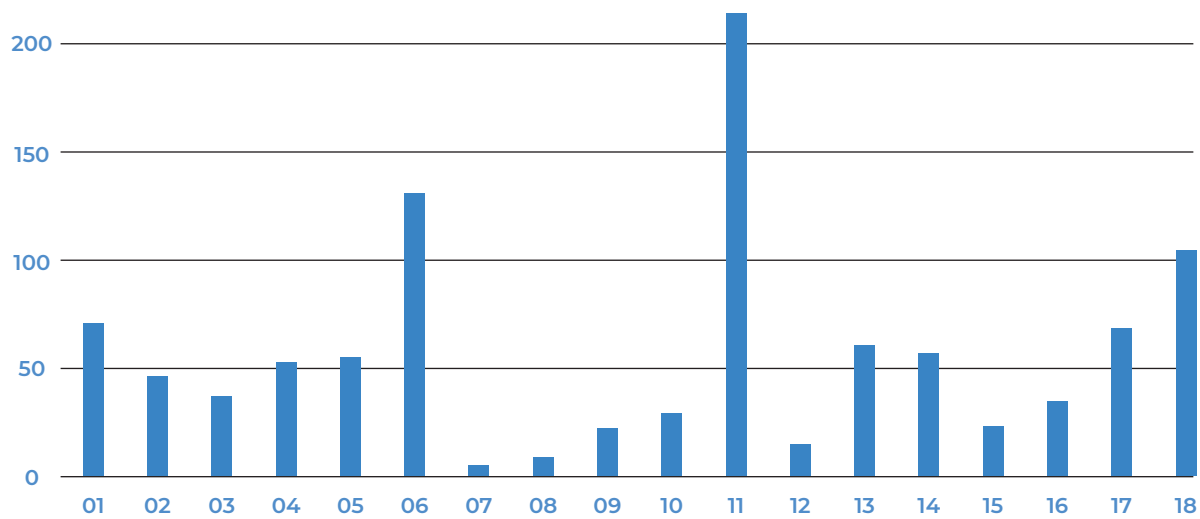
**Figure 8** | Heatmap showing reported waste in the Shkumbin river.

There is great variability in the distribution of waste along the riverbanks, with some areas much more affected by pollution. There is less waste on the outskirts of the major towns (Elbasan and Librazhd) because of the waste collection system in these two towns: waste from Librazhd is collected and sent to the Elbasan incinerator (although it should be noted that there is no precise information on the actual operation of this incinerator).

The riverbanks around the other towns, villages and housing estates crossed by the river are full of rubbish and unauthorised dumping sites, due to a lack of organized waste collection.

An open dump is also present after Elbasan. Its proximity to the river banks encourages waste to fly away. Leachate is collected in two recovery basins, but we were unable to obtain any further information.

## REPORTED LITTER

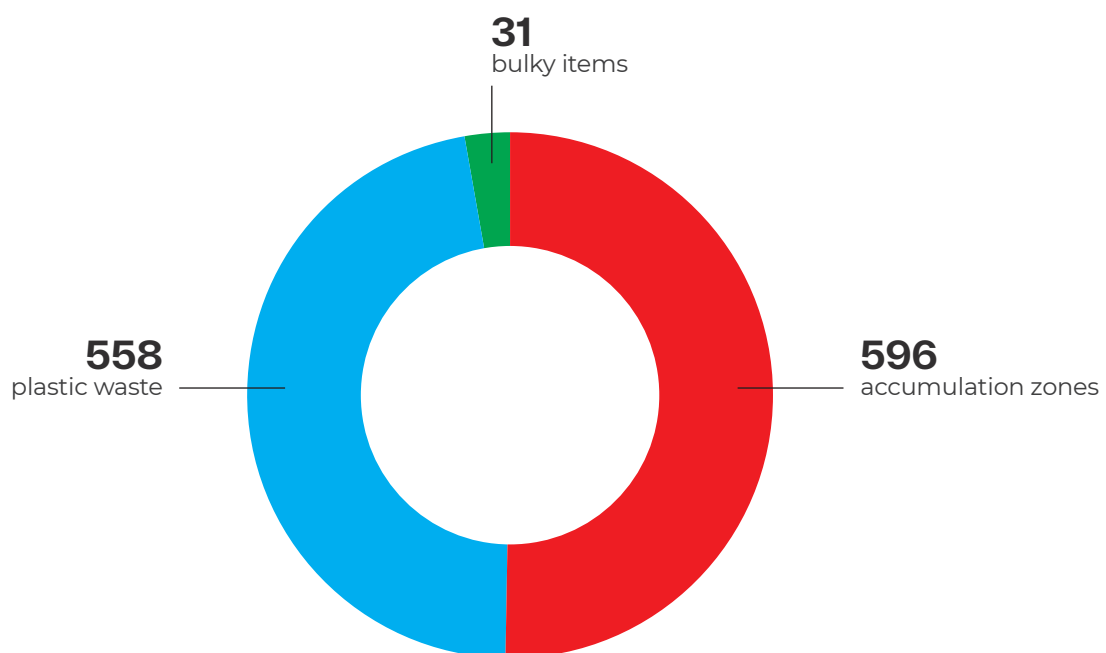


**Figure 9** | Number of items of waste reported by number of stretch of riverbank.

The Plastic Origins application, which is used in manual mode, can be used to categorise waste into three types:

- unitary waste of all types,
- bulky waste,
- accumulation areas, where there is too much waste to count.

Of the 1,185 reports, 558 were waste items, 31 were bulky items and 596 were accumulation areas.



**Figure 10** | Number of items of litter reported per km of bank observed.



# 5 ASSESSMENTS

## Assessment outlook

The aim of this mapping exercise is to provide an overview of the quantity and typology of plastic pollution in the Shkumbin catchment and to integrate this information into a relevant action plan based on the data available.

## Assessment of the participative science action

Surfrider Foundation and its volunteers are using

the Plastic Origins mobile application to collect data on plastics and other waste found on the banks of Europe's rivers. In this context, the BeMed+ project is helping to increase the dataset of the European project:

→ 18 stretches have been monitored out of the 1,083 campaigns carried out throughout Europe to date, since the start of the project.

→ 1,185 items of waste have been reported, out of the 33,902 items of waste reported throughout Europe to date, since the start of the project.



Figure 11 | Plastic Origins expedition, France. © Surfrider Foundation Europe

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## Layout

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